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A STUDY OF NON-FARM AGRICULTURAL OCCUPATIONS IN KANSAS.

KANSAS STATE BOARD FOR VOCATIONAL EDUC., TOPEKA
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TO ASSIST IN DEVELOPING EDUCATIONAL PROGRAMS FOR OFF-FARM AGRICULTURAL OCCUPATIONS, A STUDY WAS CONDUCTED TO IDENTIFY OCCUPATIONS, WHICH WERE EMERGING AND DEVELOPING, DECREASING IN IMPORTANCE, AND IN NEED OF EMPLOYEES WITH SPECIAL TRAINING. A STRATIFIED RANDOM SAMPLE OF 495 AGRICULTURAL BUSINESSES WAS INTERVIEWED BY A TRAINED TEAM USING AN INTERVIEW SCHEDULE. IT WAS ESTIMATED THAT 2,823 NEW EMPLOYEES WOULD BE NEEDED IN THE NEXT FIVE YEARS TO ACCOMMODATE BUSINESS GROWTH, AND 1,475 EMPLOYEES WOULD BE NEEDED DURING THE NEXT YEAR TO ACCOMMODATE BOTH GROWTH AND TURNOVER. EMPLOYERS DIVIDED ESSENTIAL DUTIES OF EMPLOYEES INTO WORKING WITH (1) PEOPLE OUTSIDE THE FIRM, (2) FELLOW PERSONNEL, (3) PRODUCTION, PRODUCTS, MATERIALS, OR SERVICE, (4) EQUIPMENT, TOOLS, SUPPLIES, AND INSTRUMENTS, AND (5) BUSINESS PROBLEMS. SPECIFIC SKILLS WERE IDENTIFIED FOR EACH AREA. AGRICULTURAL SUBJECTS MOST FREQUENTLY SELECTED AS NEEDED WERE--(1) GENERAL AGRICULTURAL KNOWLEDGE, (2) SALESMANSHIP, (3) TRACTOR, POWER UNITS, AND MECHANICS, (4) SOILS AND CROPS, AND (5) AGRICULTURAL CHEMICALS. CONCLUSIONS WERE--(1) THERE IS NEED FOR EMPLOYEES IN AGRICULTURAL BUSINESSES, (2) EMPLOYERS FAVORED A PLAN OF TRAINING FOR EMPLOYEES, THE TRAINING TO BE DONE BY AN AGENCY OUTSIDE OF THEIR OWN COMPANIES, AND (3) GUIDELINES FOR PLANNING TRAINING PROGRAMS WERE DIFFICULT TO ISOLATE. (JM)

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A STUDY OF NON-FARM AGRICULTURAL OCCUPATIONS IN KANSAS

A Study Made in Cooperation Between

The Kansas State Board for Vocational Education

The School of Education, Kansas State University

VT001202

Forward

This study was made possible through the cooperative efforts of the following agencies and people.

Kansas State Board for Vocational Education

495 Kansas businessmen who were interviewed

4 graduate assistants who conducted the interviews

Larry Asher
Alfred Mannebach
Charles Schaller
Vernon Schweer

Dr. Arlin M. Feyerherm, Statistician, Kansas State University

Office Staff of the School of Education, Kansas State University

No attempt has been made in this study to isolate cause and effect relationships nor technical data, but rather it is hoped that the views expressed by the Kansas businessmen interviewed will indicate to the reader as he studies the thirteen tables the need for the training of agricultural workers in non-farm occupations and some trends which should be considered when planning such educational programs.

Dr. Ray Agan, Professor
School of Education
Kansas State University

STUDY OF NON-FARM AGRICULTURAL OCCUPATIONS IN KANSAS

Introduction

The central purpose of this study was to locate and identify agriculturally oriented occupations in selected businesses. Of special interest were those agricultural occupations which were:

1. emerging and developing
2. decreasing in importance
3. in need of employees with special training.

The first step of the study was to develop complete lists of the businesses in Kansas which were recorded by the State Department of Agriculture, the State Pure Food and Drug Office, the Kansas Bankers Association, the Kansas Industrial Development Commission, and an advertising company which keeps complete lists of agriculturally oriented firms in the state.

The second step was to cross check the various lists to eliminate duplication and to select from this list companies in the state which seemed to be in category of

1. farm implement businesses
2. farm supplies businesses
3. farm produce businesses
4. farm services businesses.

The third step was to stratify the businesses selected for the four categories into population groups according to the size

of center in which they were located as follows:

1. over 50,000
2. 10,000 to 49,999
3. 2,500 to 9,999
4. less than 2,500.

The fourth step was to develop a sixteen-cell table listing the businesses selected for study according to size of population center and type of business. The size of sample from each cell was then arbitrarily determined to give the desired representation and a table of random number used to select the specific businesses to be interviewed. (see Table I)

The fifth step was to divide the state among four trained interviewers and conduct the interviews with the owners or managers of the selected businesses. An interview check list was used which was developed by the research team (Dr. Ray Agan, Larry Asher, Alfred Mannebach, Charles Schaller, and Vernon Schweer). The interview check list developed is much the same as that which was originated, tested, and used by Dr. Lloyd Phipps of Illinois in a similar study.

Step six was to tabulate the findings of the interviews into table form and give the data the simple statistical treatment needed for clearer understanding. All fractions were averaged to the nearest whole number and simple percentages calculated. Where many and diversified responses were given, clusters of information were developed when data adapted itself to this procedure.

Table I. Distribution of Companies Studied by

Type of Business and Size of Center

SIZE OF CENTER	TYPE OF BUSINESSES: FARM IMPLEMENT			FARM PRODUCE			FARM SUPPLY			FARM SERVICE			TOTAL	SAMPLE
	Total No.	No. in Sample	% in Sample	Total No.	No. in Sample	% in Sample	Total No.	No. in Sample	% in Sample	Total No.	No. in Sample	% in Sample		
Over 50000:														
Wichita	11	11	100	30	15	50	16	16	100	62	31	50	119	73
Topeka	6	6	100	26	13	50	5	5	100	17	8	50	54	32
Kansas City	4	4	100	24	12	50	12	12	100	12	6	50	52	34
St. Joseph	--	--	--	--	--	--	2	2	100	--	--	--	2	2
Total	21	21	—	80	40	—	35	35	--	91	45	--	228	141
10000 to 49999 27 centers	136	28	20.6	194	30	15.5	97	32	33.0	147	30	20.4	574	120
2500 to 9999 58 centers	179	31	17.3	176	28	15.9	108	29	26.9	128	32	25.0	591	120
0 to 2499 528 centers	383	30	7.8	340	29	8.5	709	32	4.5	154	28	18.2	1586	119
TOTAL	719	110	15.3	790	127	16.1	950	128	13.5	520	135	26.0	2979	500

Findings

The completed list from steps one and two yielded 2979 firms in the State which were agricultural in the nature of their business. A sample of 500 firms were selected (see Table I) and 495 were interviewed. Five businesses were closed and the interviewers were unable to locate them.

The company officers interviewed were asked to classify the function of their company. Some gave several functions while others were able to make one classification. Following are the categories given by the company officers and the percentage of replies for each:

Manufacturing	3%	Warehousing	19%
Purchasing	14%	Processing	13%
Servicing	47%	Wholesaling	36%
Retailing	84%	Other	8%

The company officers were asked to list all the job titles of employees in their firm which were agricultural in nature. A total of 126 titles was listed.. The 126 titles were then clustered into 13 related areas. In Table II is presented the number of employees with job titles which were adjudged agricultural in nature or requiring agricultural information and/or skills for the efficient performance of the duties of the position. An expansion factor was then used to arrive at an estimated number of such employees in the state.

Table II. Job Titles in Businesses Interviewed Which Were Agricultural in Nature

Job Title	Total Number in Sample	Estimated Number in State	Per Cent of Businesses With This Job Title
Elevator Manager	299	1803	60.40
Elevator and Yard Assistants	57	344	11.52
Warehouseman	115	693	23.23
Sales Managers	15	90	3.03
Implement Salesmen	41	247	8.28
Salesmen	81	488	16.36
Mechanic	235	1417	47.47
Processors	15	90	3.03
Assembly and Hauling	15	90	3.03
Fertilizer Applicator	0	0	00.00
Office Personnel	5	30	1.01
Nursery Aide	49	295	9.90
Laborers	199	1200	24.04
TOTAL	1126	6787	

The company officers were asked information about the rate of turnover of employees and their anticipated needs for employees as follows:

1. What was the total number of different persons with this job title employed in the past five years?
2. What is the anticipated number of additional employees with this job title needed in five years due to growth of the business?
3. What is the anticipated number of additional employees with this job title needed in the next 12 months due to growth and turnover?
4. If a supply of persons especially trained for this job title were available, what salary would be a reasonable starting wage?

The responses of the employers were expanded to give estimated state totals and presented in Table III. The employers interviewed estimated that 2,823 additional employees would be needed in the State of Kansas in the next five years due solely to growth of business in agricultural non-farm business. This figure is in addition to those needed for the normal turnover of employees.

Employers felt that training needs for the 2,823 employees could be met by special area schools in 88 per cent of the cases. All the employers interviewed felt that mechanics, fertilizer applicators, salesmen, nursery aides, and assembly and hauling workers could be trained by such programs. (See Table XII)

The employers in their comments, as a group, favored the plan of training employees for work by an agency outside of their own company and expressed a desire to cooperate with any such program.

Table III. Anticipated Future Need of Employees

With Agricultural Training in Kansas

Job Title	Persons Employed in Past 5 Years	Additional Employees Needed Due to Growth in 5 Years	Additional Employees Needed Due to Growth and Turnover 12 Months	Estimated Starting Salary Per Month
Elevator Manager	320	121	36	$378
Elevator and Yard Assistants	555	139	0	274
Warehouseman	211	464	229	400
Sales Managers	109	175	42	425
Implement Salesmen	386	133	60	324
Salesmen	103	121	42	275
Mechanic	1278	650	205	260
Processors	277	163	42	278
Assembling and Hauling	78	139	18	286
Fertilizer Applicator	205	229	0	300
Office Personnel	60	181	36	350
Nursery Aide	229	133	72	390
Laborers	1224	175	693	367
TOTAL	5035	2823	1475	

In order to determine training needs for employees with different job classifications, the company officers were asked to describe the work of the employees with the different job titles, first in broad descriptive areas and then in greater detail. The five broad areas were identified as:

1. working with people outside the firm
2. working with personnel in the firm
3. working with production, products, materials or service
4. working with the firm's or customers' equipment, tools (hand or power), supplies and instruments
5. working with business problems.

The results of these questions are presented in Table IV. Although there are differences in the activities and duties of the various agricultural employees in the businesses studied, the average worker was expected to be quite diversified and proficient in several areas. The average worker in the non-farm agricultural business may be depicted as shown in figure 1. Following is a composite of the responses received for the average worker in an agricultural non-farm business. He should spend:

28% of his time working with people outside the firm

28% of his time working with equipment

21% of his time with business problems

15% of his time working with production and service

8% of his time working with people in the firm.

Figure 1. Mr. Average Employee for Non-Farm Agricultural Businesses

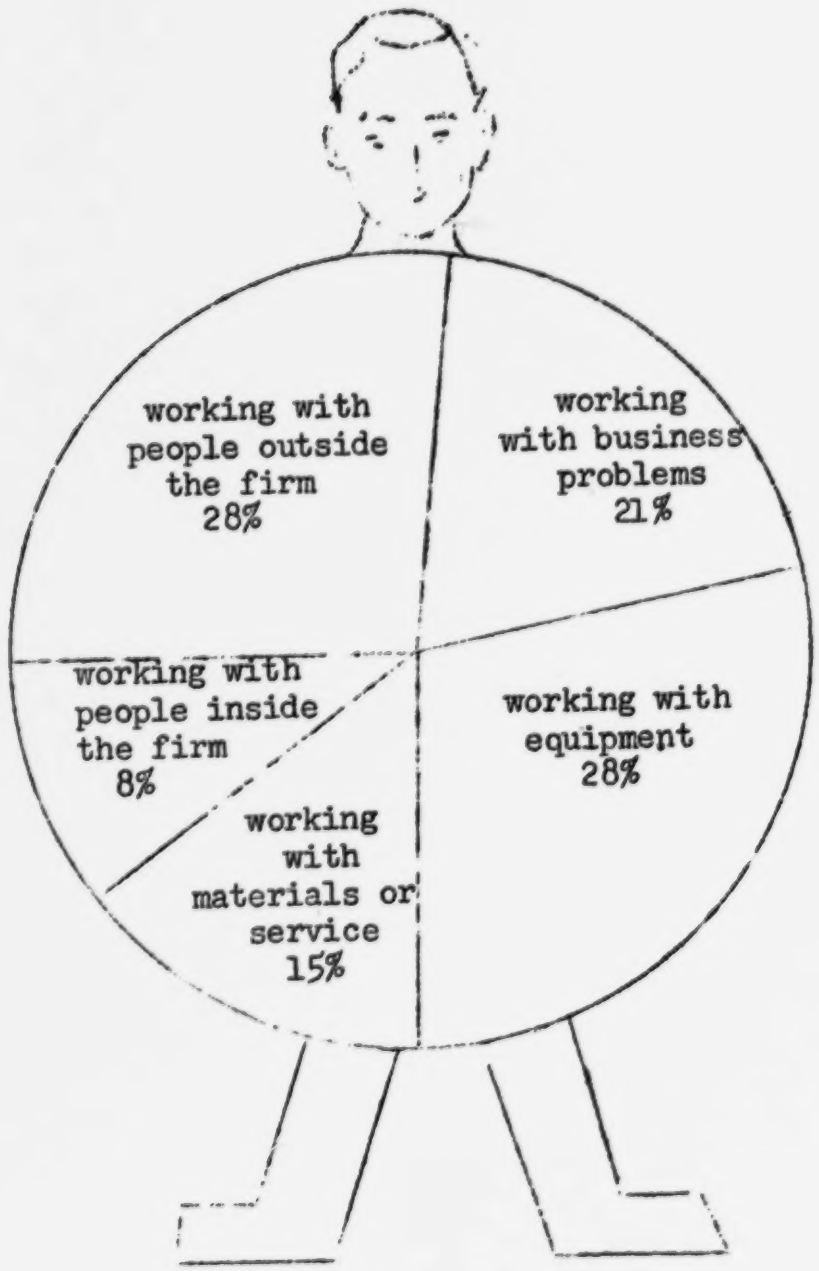
working with people outside the firm 28%
working with business problems 21%
working with people inside the firm 8%
working with materials or service 15%
working with equipment 28%

Table IV. Activities and Duties of Employees

Job Title	Per Cent of Time Working With People Outside the Firm	Working With People in the Firm	Working With Production, Products, Materials, or Service	Working With Equipment	Working With Business Problems
Elevator Manager	22	17	13	16	32
Elevator and Yard Assistants	30	2	24	34	10
Warehouseman	30	15	15	30	10
Sales Managers	28	18	10	10	34
Implement Salesmen	27	6	21	16	30
Salesmen	34	1	20	10	35
Mechanic	23	4	19	42	12
Processors	23	14	18	22	23
Assembly and Hauling	39	0	10	43	8
Fertilizer Applicator	15	0	15	62	8
Office Personnel	18	25	0	6	51
Nursery Aide	48	0	10	34	8
Laborers	28	4	13	42	13
AVERAGE	28	8	15	28	21

The employers expressed a need for their employees to work with other people, giving a 36 per cent emphasis to this area of their activities and duties. By the same measure they gave 21 per cent emphasis to being able to work with business problems.

The company officers were asked to describe the activities of their employees in working with people outside the firm. The summary of their answers may be seen in Table V. For the major part their answers could be classified as meeting people, both farmers and non-farmers, in activities of diagnosing, consulting, advertising and selling. This would on the average include 85 per cent of their answers, indicating a definite training need in this area. In analyzing more closely the 28 per cent of time spent by employees in working with people outside the firm, the following job description was obtained, ranked in order of the emphasis given by the employers.

The employeed should be able to:

1. Meet farm people
2. Meet non-farm people
3. Diagnose, consult, advertise
4. Sell
5. Estimate costs and buy wisely

A study of Tables X and XI will further indicate the areas in which technical information is needed in order to carry out the above functions.

The special skills needed by employees for working with personnel in the firm, as presented by the employers, is shown in Table VI. "Handling men" and "being able to train others" were given more than 50 per cent of the emphasis on the average by the

employers. However, three job titles failed to receive any emphasis in the area of working with personnel in the firm--fertilizer applicator, assembling and hauling, and nursery aide.

The employers were asked to analyze more fully the special skills needed by their employees in working with production, products, materials, or service. The most highly valued skills ranked by the employers were:

1. Use of technical and service manuals
2. Inspection for weaknesses
3. Assembling and mixing
4. Planning production

The position of office personnel was not ranked by the employers because they were thinking of only agricultural functions and services.

The employers were asked by the interviewers to identify the special skills needed by the workers in relation to working with the firm's or customers' equipment, tools (hand or power), supplies and instruments. The replies of the company officers were summarized and placed in Table VIII. In working with equipment, tools, supplies, and instruments of the company or of the customer, employers valued most highly the ability to:

1. Operate properly
2. Maintain
3. Adjust
4. Inspect and trouble shoot

Table V. Special Skills Needed by Employees for Working With People Outside the Firm

Job Title	Total	Per Cent of Emphasis Given by Employers to: Meeting Farm People	Meeting Non-Farm People	Selling	Advertising Consulting Diagnosis	Estimating Costs	Buying	Other
Elevator manager	22	21	17	20	13	8	21	0
Elevator and Yard Assistants	30	36	12	20	9	7	9	7
Warehouseman	30	26	32	5	16	5	5	11
Sales Managers	28	23	23	23	16	6	9	0
Implement Salesmen	27	22	15	22	21	10	10	0
Salesmen	34	23	18	22	19	14	4	0
Mechanic	23	30	10	13	28	17	1	1
Processors	23	18	18	18	18	18	10	0
Assembly and Hauling	39	37	26	15	15	0	0	7
Fertilizer Applicator	15	50	0	0	50	0	0	0
Office Personnel	18	0	67	33	0	0	0	0
Nursery Aide	48	27	26	23	23	1	0	0
Laborers	28	32	26	19	15	0	4	4
AVERAGE		27	23	16	19	7	6	2

Table VI. Special Skills Needed by Employees

for Working with Personnel in the Firm

Job Title	Total	Per Cent of Emphasis Given by the Employees to Handling Men (Boss)	Inducting New Personnel	Training Others	Appraising Work of Others	Supervising Others	Other
Elevator Manager	17	23	18	19	16	23	1
Elevator and Yard Assistants	2	80	0	20	0	0	0
Warehouseman	15	34	11	11	11	33	0
Sales Managers	18	25	10	25	15	25	0
Implement Salesmen	6	20	20	20	20	20	0
Salesmen	21	0	0	25	25	25	25
Mechanic	4	23	13	27	20	17	0
Processors	14	25	16	25	17	17	0
Assembling and Hauling	0	0	0	0	0	0	0
Fertilizer Applicator	0	0	0	0	0	0	0
Office Personnel	25	25	0	25	25	25	0
Nursery Aide	0	0	0	0	0	0	0
Laborers	4	50	0	17	33	0	0
AVERAGE		31	9	21	18	19	2

Table VII. Special Skills by Employees for

Working with Production, Products, Materials, or Service

Job Title	Total	Per Cent of Emphasis Given by Employers to: Designing	Making and Building	Sketching and Drawing	Mixing	Assembling	Inspecting	Testing	Calculating Costs	Conducting Research	Using Technical and Service Manuals	Developing Techniques	Planning Production	Other
Elevator Manager	13	7	7	3	15	2	13	12	12	1	10	7	11	0
Elevator and Yard Assistants	24	3	3	3	22	0	24	22	3	0	3	7	10	0
Warehouseman	15	11	11	0	11	0	12	11	11	0	11	11	11	0
Sales Managers	10	9	9	9	0	18	9	0	0	0	28	9	9	0
Implement Salesman	21	0	2	10	0	3	11	11	14	0	23	13	13	0
Salesman	20	4	2	2	0	4	6	4	21	10	19	13	15	0
Mechanic	19	1	3	2	0	16	14	14	11	0	29	5	3	2
Processor	18	0	0	0	0	0	27	13	6	0	0	27	27	0
Assembly and Hauling	10	11	11	0	0	11	0	0	0	0	67	0	0	0
Fertilizer Applicator	15	0	0	0	50	50	0	0	0	0	0	0	0	0
Office Personnel	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Nursery Aide	10	23	0	8	0	15	8	0	23	0	8	0	0	15
Laborers	13	0	5	5	21	11	11	5	0	5	5	6	5	21
AVERAGE	6	5	4	10	10	11	8	8	2	16	8	9	3	

Table VIII. Special Skills Needed by Employees for Working

With Equipment, Tools, Supplies and Instruments

Job Title	Total	Per Cent of Emphasis Given by Employers to: Constructing	Designing	Repairing	Operating	Assembling	Calibrating	Remodeling	Adjusting	Maintaining	Inspecting and Trouble-Shooting	Installing	Selecting	Other
Elevator Manager	16	0	1	14	23	2	3	2	12	19	10	6	8	0
Elevator and Yard Assistants	34	0	0	20	32	2	0	0	8	22	10	6	0	0
Warehouseman	30	0	0	5	30	5	0	5	20	20	5	5	5	0
Sales Managers	10	0	0	7	13	13	0	0	13	21	13	13	7	0
Implement Salesman	16	0	2	4	27	3	8	0	14	12	15	4	11	0
Salesman	10	0	0	0	28	0	0	16	0	12	32	0	12	0
Mechanic	42	1	1	14	16	7	5	6	12	15	11	8	4	0
Processors	22	0	0	0	28	0	11	6	16	16	11	6	6	0
Assembling and Hauling	43	0	3	10	28	3	3	0	23	27	0	0	3	0
Fertilizer Applicator	62	0	0	12	13	12	13	12	0	13	13	12	0	0
Office Personnel	6	0	0	0	100	0	0	0	0	0	0	0	0	0
Nursery Aide	34	0	2	16	32	4	0	0	14	30	0	0	2	0
Laborers	42	0	0	15	30	2	2	2	17	28	4	0	0	0
AVERAGE		0	1	9	31	4	3	4	11	18	10	5	4	0

The employers were asked to identify the special skills needed by the employees in working with business problems. The summary of their responses may be seen in Table IX. The employers interviewed expected the workers to be proficient in working with business problems, ranking the most important skills in the following order:

1. Keeping records and accounts properly
2. Making decisions wisely
3. Handling money properly

Fifty-seven per cent of the emphasis given by the employers was to these three areas.

Employers seemed in agreement as to the general need for employees in their businesses who were familiar with agriculture. The interviewers asked the employers to identify those areas, strictly agricultural and related to agriculture, with which employees in the various job classifications should be familiar. In Table X and XI are summarized the replies of the company officers interviewed. The employers selected from a list of 46 technical subject matter areas the special areas of knowledge needed by the workers. Following are the most frequently selected subject matter areas in order of the importance given them by the employers.

1. General agricultural knowledge
2. Salesmanship
3. Tractor, power units, and mechanics
4. Soils and crops
5. Ag. chemicals, insect and pest control

In Table X which deals with some of the more clearly agricultural areas, it may be observed that the field crops, soils,

water management, horticulture, and floriculture areas received an average of 18 per cent of the total emphasis. The livestock areas received an average of 12 per cent, the mechanical areas 17 per cent, and the agricultural economics, chemicals, and general areas 17 per cent. A study of the table reveals differences among the different job titles but most tend to be diversified among the various areas.

In Table XI it may be noted that little or no emphasis was given to chemistry, physics, advanced mathematics, foreign language, research procedures, electronics, sound and light, metallurgy and architecture. Employers appeared to favor the classification of the principles of the basic sciences taught as a part of the agricultural areas in which it is used as an applied area of knowledge.

Table IX. Special Skills Needed by Employees for

Working with Business Problems

Job Title	Total	Per Cent of Emphasis Given by Employers to: Policy Making	Planning	Promoting	Handling Money	Keeping Records, Accounts	Writing Articles, Copy, etc.	Making Speeches	Filing	Inventory	Making Technical Reports	Reading Technical Reports	Decision Making	Other
Elevator Manager	32	10	12	10	15	13	2	2	6	10	4	4	12	0
Elevator and Yard Assistants	10	13	13	18	6	25	0	0	0	0	6	13	6	0
Warehouseman	10	0	14	0	0	14	0	0	0	14	14	14	30	0
Sales Managers	34	8	12	12	17	17	0	0	2	5	2	5	20	0
Implement Salesman	30	6	7	10	14	14	2	0	6	12	8	9	13	0
Salesman	35	5	10	14	19	15	0	4	1	3	9	10	12	0
Mechanic	12	0	3	14	9	26	1	0	3	6	7	11	20	0
Processor	23	10	16	16	16	16	0	0	0	10	0	0	16	0
Assembly and Hauling	8	0	14	0	14	14	0	0	0	14	0	0	44	0
Fertilizer Applicator	8	0	0	0	0	100	0	0	0	0	0	0	0	0
Office Personnel	51	0	11	11	11	11	0	0	11	11	11	11	12	0
Nursery Aide	8	0	0	0	45	28	0	0	0	0	0	9	18	0
Laborers	13	5	5	5	15	25	0	0	0	10	5	5	25	0
AVERAGE		4	9	9	14	25	0	0	2	7	5	7	18	0

Table X. Agricultural Areas With Which Workers Need to be Familar

Per Cent of Emphasis Given by Employers According to Job Title

Subject Matter Area	Ave. all Job Titles	Elevator Manager	Elevator & Yard Assist.	Warehouse-man	Sales Managers	Implement Salesman	Salesman	Mechanic	Processors	Assembly & Hauling	Fertilizer Applicator	Office Personnel	Nursery Aide	Laborer
Soils	5	5	6	5	4	6	4	3	0	3	12	0	9	2
Soil & Water Mgt.	3	2	3	5	0	1	3	1	0	1	12	0	6	0
Crops	5	5	8	9	4	6	4	4	0	5	12	5	1	5
Horticulture	1	1	1	0	0	0	3	0	0	0	0	0	10	1
Floriculture	1	0	0	0	0	0	0	0	0	0	0	0	7	1
Livestock	3	4	4	2	1	4	4	2	11	2	0	0	0	4
Poultry	2	3	3	2	1	0	2	0	4	0	0	0	0	5
Dairy	2	3	3	3	1	2	2	1	4	1	0	0	0	4
Feeds	2	5	7	3	3	1	3	0	2	1	0	0	0	7
Animal Nutrition	2	4	5	2	1	1	3	0	0	0	0	0	0	6
Animal Diseases	1	3	1	2	0	0	2	0	2	0	0	0	0	7
Plant Diseases	3	3	5	5	1	1	3	0	0	0	6	0	10	2
Tractors & Power Units	6	3	5	5	5	7	5	11	4	10	12	5	7	5
Electricity	2	2	3	3	1	2	2	6	7	1	0	0	0	3
Farm Mech.	4	2	2	3	4	6	4	10	0	8	0	5	0	2
Shop Work	4	1	3	3	1	5	1	8	0	10	10	0	0	5
Carpentry	0	1	0	2	0	0	0	0	0	0	0	0	0	1
Farm Bldgs.	0	1	0	0	0	0	1	0	0	0	0	0	0	1
Farm Conveniences	1	1	0	0	0	1	2	1	0	4	0	0	0	1
Agr. Econ.	2	4	2	3	5	3	3	1	0	2	0	6	0	0
Gen. Agr.	9	5	8	12	9	7	5	10	9	11	12	11	5	8
Ag. Chem.	4	4	6	5	3	4	3	2	2	1	12	0	7	4
Insect & Pest Control	4	5	5	3	3	1	3	0	4	0	6	0	10	7

Table XI. Related Agricultural Areas With Which Workers Need to be Familar

Per Cent of Emphasis Given by Employers According to Job Title

Subject Matter Area	Ave. All Job Titles	Elevator Manager	Elevator & Yard Assist.	Warehouse-man	Sales Managers	Implement Salesman	Salesman	Mechanic	Processors	Assembly & Hauling	Fertilizer Applicator	Office Personnel	Nursery Aide	Laborers
Forestry	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Food Processing	2	0	1	0	1	0	1	0	13	0	0	0	0	0
Rural Recreation	0	0	0	0	1	0	0	0	0	0	0	0	2	0
Credit	3	5	1	2	9	5	5	2	7	2	0	0	1	0
Insurance	2	3	1	0	5	3	3	1	0	1	0	5	1	0
Taxes	2	3	0	0	5	3	3	0	7	0	0	5	1	0
Accounting	2	4	0	0	4	2	3	1	2	1	0	11	1	0
Bus. Prin.	4	5	3	3	9	5	3	3	7	7	0	5	4	2
Office Procedures	3	4	1	0	5	5	7	1	0	1	0	11	1	1
Salesmanship	7	4	6	6	9	8	7	7	9	8	0	5	12	5
Chemistry	0	0	0	0	0	0	0	0	0	1	0	0	1	2
Physics	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Adv. Math.	0	0	0	0	0	0	0	0	0	0	0	0	0	0
For. Language	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Research Procedures	0	1	0	0	0	0	0	0	0	0	0	0	0	0
Electronics	0	0	1	0	0	0	0	1	0	0	0	0	0	0
Mechanics	5	2	5	8	4	6	3	10	0	9	6	5	1	0
Sound & Light	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hydraulics	2	1	1	0	1	5	2	9	0	8	0	0	0	0
Metallurgy	0	0	0	0	0	0	1	2	0	1	0	0	0	0
Heat	1	1	0	2	0	0	0	2	6	0	0	0	1	0
Architecture	0	0	0	0	0	0	0	0	0	0	0	0	1	0
Other	1	0	0	2	0	0	0	1	0	1	0	11	2	0
TOTAL TABLE X & XI	100	100	100	100	100	100	100	100	100	100	100	100	100	100

A study was also made of the special prerequisites for gaining employment in the various job titles. The prerequisites as given by the employers are listed in Table XII. A variety of responses was received for the various jobs, however more than 88 per cent of the responses reflected a belief that the requirements could be met by a program of special training. Job titles classified by all employers as being those for which a program of special training could qualify a student for entry were mechanics, fertilizer applicator, all salesmen, assembling and hauling, and nursery help.

The employers were asked to state the minimum educational requirement for entry into the jobs. With two exceptions the modal measure of the responses was for the high school graduate (Table XIII). For processors and nursery help all of the employers were willing to accept less than twelve years of formal education.

Table XII. Special Prerequisites for Gaining Employment

Job Title	Per Cent Requiring: Work Experience	Work Experience Prior to Job	Work Experience or On-the-Job Training	Minimum or Maximum Age Limits	Per Cent Who Felt That Requirements Could Be Met With Specialized Training
Elevator Manager	74	100	35	39	97
Elevator & Yard Assistant	19	100	0	44	94
Warehouseman	29	100	0	43	71
Sales Managers	88	86	29	25	100
Implement Salesman	78	100	33	0	100
Salesman	11	100	100	39	100
Mechanic	57	97	60	20	100
Processors	67	100	25	0	0
Assembly & Hauling	11	100	0	11	100
Fertilizer Applicator	0	0	0	0	100
Office Personnel	50	0	100	100	96
Nursery Aide	13	0	100	18	100
Laborers	10	100	0	24	88

Table XIII. Formal Educational Requirement for Entry into Jobs

Job Title	Per Cent of the Employers Who Responded						
	None	Less than 4 years	Less than 8 years	Less than 12 years	High School Graduate	Less than 16 years	College Graduate
Elevator Manager	7	0	0	3	63	17	10
Elevator & Yard Assistant	0	13	0	0	81	6	0
Warehouseman	14	0	0	0	86	0	0
Sales Managers	0	0	0	17	50	33	0
Implement Salesman	4	4	0	8	46	38	0
Salesman	0	0	0	11	83	6	0
Mechanic	11	5	2	5	55	22	0
Processors	0	0	0	100	0	0	0
Assembly & Hauling	10	20	10	20	40	0	0
Fertilizer Applicator	0	0	0	0	100	0	0
Office Personnel	14	9	0	18	59	0	0
Nursery Aide	0	0	0	100	0	0	0
Laborers	14	0	0	0	72	10	4

Summary and Conclusions

The purpose of this study was to discover information which would assist in planning training programs for non-farm agricultural occupations in Kansas. Lists were compiled and samples drawn which would give cross-section representation of the State. The job titles given were grouped into thirteen areas by the researchers for ease of reporting and understanding.

The number of employees included in the sampling procedure was 1126. The growth of business estimated by the employers interviewed for the next 5 years indicated a demand for 2823 new employees plus 1475 employees needed due to growth and turnover in a 12 month period. The obvious conclusion here is that the need for employees in the agricultural businesses studied is and will continue to be large.

Employers generally welcomed the concept of training men for these occupations and recognized the needs. Definite guide lines were difficult to isolate, however, and groupings were made of "clusters of information" which it is hoped will be of value to those who plan programs for such training.